

REMARKS

The present Amendment is in response to the Office Action dated May 18, 2010. Applicant's representative thanks the Examiner for the courtesy of a telephone interview on September 16, 2010, and claims 1, 57-58, 72 and 74 have been amended in accordance with the discussion during the interview. Claims 1, 37-53, 56-60, 62-64 and 66-75 remain pending. No claims have been cancelled in responding to the Office Action. It is respectfully requested that if the Examiner still has any remaining concerns with respect to the rejections under 35 U.S.C. § 112, he contact the undersigned.

In the Office Action, the Examiner rejected claims 1, 37-53, 56-60, 62-64 and 66-75 under 35 U.S.C. § 112, first paragraph. Claims 1, 37-53, 56-60, 62-64 and 66-75 were also rejected under 35 U.S.C. § 112, second paragraph. Claims 74-75 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Berlinghof, Jr. (U.S. Patent No. 3,342,667) (hereinafter, "Berlinghof"). Thus, as confirmed by the Examiner in the Office Action, claims 1, 37-53, 56-60, 62-64 and 66-73 would be allowable if rewritten or amended to overcome the rejections under 35 U.S.C. § 112.

Claim Rejections – 35 U.S.C. § 112

Independent claims 1, 72 and 74 have been amended as discussed during the interview to address the Examiner's concerns with respect to the rejections under the first paragraph of Section 112. The claims have been amended to more clearly articulate the nature of either (i) the substrate having a sliding layer of a polymer-based bearing material or (ii) the substrate having a layer of a metallic bearing thereon in the manner recited in claims 1 and 72. Claim 74 has been amended to clarify that the substrate has a sliding layer of a polymer-based bearing material thereon and being adhered to the plain bearing by adhesive properties of the polymer-based matrix material. In view of the amendments made it is respectfully submitted that the rejection has been addressed.

Independent claims 1, 72 and 74 have also been amended as discussed during the interview to address the Examiner's concerns with respect to the rejections under the second paragraph of Section 112. Specifically, the claims have been amended to clarify that the polymer-based bearing

material includes a total content of solids addition not to exceed 35 vol% in the form of the particles to the metal powder, the particles of the fluoropolymer content, any ceramic powder, and any silica. Support for the amendment can be found in various portions of the specification. For example, as summarized in paragraph [0040]:

Desirably, the total content of solids additions to the plastics matrix should not exceed 35 vol % irrespective of the total individual constituent contents specified above. In general, the total solids content (pigment volume content, PVC) of additions to the matrix may preferably lie in the range from 10 to 30 vol % and, more preferably within the range of 20 to 30 vol %.

As explicitly discussed at paragraph [0060]: “The column headed "PVC", denotes the total "pigment volume content" in the matrix and comprises metal powder, silica, fluoropolymer and all other additions.” Further support for the recitation can also be found in the specific tables such as Table 2, which gives examples including ceramic powder. Thus, it is respectfully submitted that the term “solids” is defined and does not include the polymer based bearing material.

The Examiner rejected claims 57 through 58 under the Second paragraph of Section 112 as being confusing and indefinite. The language of both dependent claims has been clarified and simplified as discussed with the Examiner during the interview. Claim 57 now recites that the ceramic powder content lies in the range from approximately 2 to 20 vol%. Claim 58 now recites that the silica content lies in the range from approximately 4 to 10 vol%.

It is respectfully submitted that with the amendments made the various rejections under Section 112 have been addressed. As noted above, if there are any remaining concerns a telephone call would be gratefully appreciated.

Claim Rejections – 35 U.S.C. § 103

Claims 74-75 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Berlinghof, Jr. (U.S. Patent No. 3,342,667) (hereinafter, “Berlinghof”). As noted by the Examiner, prior to the amendment he was interpreting that the solids addition was directed to the ceramic powder and silica only. However, the solids addition is not limited in such a manner and claim 74 has been amended to more clearly articulate the meaning of a total content of solids addition as discussed above.

Claim 74 and accompany dependent claim 75 is patentable over the cited references at least because Berlinghof fails to disclose that the “total solids content of the polymer-based bearing material does not exceed 35 vol% in the form of the particles of the metal powder, the particles of the fluoropolymer content, any ceramic powder, and any silica”

Berlinghof is directed to a polymer-based bearing material comprising a thermosetting resin matrix containing 18 – 52 vol% metal particles, and around 14 to 32 vol% fluorocarbon, together with 12 to 32 vol% solid lubricants. (*See* Col. 3, lines 49 – 66). Moreover, Berlinghof discloses an addition of solids content to be around at least 44 vol%, based on a minimum metal content of 18%, a minimum solid lubricant content of 12% and a minimum fluorocarbon content of 14%. (*See* Col. 3, lines 49 – 66). Thus, the lowest solids content is 44% of the final bearing volume, which is substantially higher than the 35 vol% solids content as required by Applicants’ independent claim 74, as amended.

Therefore, independent claim 74 and dependent claim 75 are patentable over the cited references of record.

Conclusion

In view of the above amendment and remarks, the pending application is in condition for allowance. If, however, there are any outstanding issues that can be resolved by telephone conference, the Examiner is earnestly encouraged to telephone the undersigned representative.

It is believed that any fees associated with the filing of this paper are identified in an accompanying transmittal. However, if any additional fees are required, they may be charged to Deposit Account No. 18-0013, under Order No. 66775-0009. To the extent necessary, a petition for extension of time under 37 C.F.R. § 1.136 is hereby made, the fee for which should be charged against the aforementioned account.

Application No. 10/561,650
Amendment dated September 20, 2010, the 18th falling on a Saturday
Reply to Office Action of March 23, 2010

Docket No.: 66775-0009

Dated: September 20, 2010, the 18th falling Respectfully submitted,
on a Saturday

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